

**TO: HOLDERS OF THE COMPONENT MAINTENANCE MANUAL SUPPLEMENT 23500-1, DATED MAR 15/03.**

**REVISION NO. 3 DATED SEP 27/18**

**HIGHLIGHTS**

THIS PUBLICATION HAS BEEN REPRINTED IN ITS ENTIRETY. REPLACE ALL PREVIOUSLY ISSUED COPIES OF THE SUPPLEMENT 23500-1.

The highlights of the revision are outlined below. The pages have been revised and maintain the format of ATA 100 and the AECMA Simplified English guidelines.

<b>CHAPTER/SECTION &amp; PAGE NO.</b>	<b>DESCRIPTION OF CHANGE</b>
All Pages	Updated Document template to latest format with new logo and company name. Added initial release and current revision details to the footer.
Page RR-1	Revised page dates.
Page 1	Updated DOT number designation.
Page 2	Corrected switch opening range in pressure gauge.
Page 902	Updated company name in source details column.
Page 1002	Updated pressure gauge switch and cartridge schematics.



AMERON

MASS Systems

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**FIRE EXTINGUISHER, DUAL OUTLET**

**60-CUBIC INCH (0,98 LITER)**

**P/N 23500-1**

**SUPPLEMENT TO**

**COMPONENT MAINTENANCE MANUAL 26-22-02**

**TECHNICAL PROPERTIES AND**

**ILLUSTRATED PARTS LIST**

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### PMA PARTS NOTICE

AMETEK Ameron, LLC d/b/a MASS Systems will provide full warranty on all fire extinguishers provided the component parts used in the repair and overhaul process have formal after-market FAA-PMA authority for use on the fire extinguisher application.







## LIST OF EFFECTIVE PAGES

SUBJECT	PAGE	DATE
Title Page	T-1	Sep 27/18
Notices	T-2	Sep 27/18
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**TECHNICAL PROPERTIES**

**Table 1**

PROPERTY	SPECIFICATION
Description	
Part Number	23500-1
Customer Part Number	900P3690000-101
Nomenclature	Fire Extinguisher, Dual Outlet
Complies with	MIL-C-22284 and DOT-SP-10440-900
Customer Specification Number	900PT690002
Functional Properties	
Internal Volume	60-cubic inches (0,98 liter)
Extinguishing Agent	Bromotrifluoromethane (CBrF <sub>3</sub> )
Pressuring Gas	Nitrogen (N <sub>2</sub> )
Pressure Data at 70°F (21°C)	
Charge Pressure	750- to 775-psig (5171 to 5344 kPag)
Hydrostatic Test Pressure *	2150-psig (14824 kPag)
Burst Pressure	2900-psig (19996 kPag) minimum
Ambient Temperature Range	-65°F to +160°F (-54°C to +71°C)
Weight Data	
Empty Fire Extinguisher **	2.52-pounds (1,14 kg) maximum
Extinguishing Agent (full charge)	2.00- to 2.10-pounds (0,91 to 0,95 kg)
Nitrogen Charge	0.08 pound (0.04 kg)
Charged Fire Extinguisher **	4.70-pounds (2,13 kg) maximum
Weight Check Interval	Once a year is recommended
Allowable weight deviation – actual weight versus weight marked on identification plate	Minus 0.10 pound (0.05 kg)

* The fire extinguisher hydrostatic test interval is every 5 years. If 5-years have not elapsed, hydrostatic test can be waived.
** Weight check includes the outlet valves (Items 30 and 35). Weight check does <b>not</b> include the cartridges (Items 5 and 10).





SUPPLEMENT COMPONENT MAINTENANCE MANUAL

PROPERTY	SPECIFICATION
<p>Cartridge Data</p> <p>Voltage</p> <p>Current Rating – All-Fire</p> <p style="padding-left: 40px;">No-Fire</p> <p>Test Current</p> <p>Bridgewire Resistance</p> <p>Electrical Connector, 3 Pin, Mates with</p> <p>Maximum Life – Service and Storage</p> <p>Classification</p> <p>Torque</p> <p>Lockwire Size</p>	<p>16 to 30 VDC</p> <p>3.5 Amperes</p> <p>1.0 Ampere, 1.0 Watt for five- minutes maximum</p> <p>0.02 Ampere maximum continuous</p> <p>0.9- to 1.1-Ohm</p> <p>MS38999/26MA98SN (primary – red stripe)</p> <p>MS38999/26MA98SA (secondary – blue stripe)</p> <p>10-years</p> <p>1.4s, UN0323 (both cartridges)</p> <p>90 to 100 inch-pounds (10,2 to 11,3 N·m)</p> <p>0.032 inch (0,81 mm)</p>
<p>Pressure Gauge Data</p> <p>Pressure Range</p> <p>Accuracy at 600 psig</p> <p>Accuracy Remainder of Scale</p>	<p>0-to 1500-psig, 100-psi increments (0 to 10342 kPag, 689.5 kPag increments)</p> <p>±20-psig (±137,9 kPag)</p> <p>±60-psig (±413,7 kPag)</p>
<p>Voltage Rating</p> <p>Current Rating</p> <p>Switch Closing-Increasing Pressure</p> <p>Switch Opening-Decreasing Pressure</p> <p>Connector Pins</p> <p>Electrical Connector, Mates with</p> <p>Orientation to Horizontal Centerline</p>	<p>17- to 30-VDC</p> <p>4.0-amperes resistance at 28-VDC</p> <p>450-psig (3103 kPag) maximum</p> <p>200±100 psig (1379±690 kPag)</p> <p>N.C. = Pins C to B / Open = C to A</p> <p>MS38999/26MA98SB</p> <p>Parallel within ± 10-degrees</p>
<p>Outlet Disc Data</p> <p>ID Length</p> <p>Flange Thickness</p>	<p>0.255- to 0.265-inch (6,48 to 6,73 mm)</p> <p>0.095- to 0.105-inch (2,41 to 2,67 mm)</p>
<p>Filler with burst disc data</p> <p>Flange thickness</p> <p>Thread Size</p>	<p>0.045- to 0.055-inch (1,14 to 1,40 mm)</p> <p>MS33514G4</p>
<p>Outlet Valve Assembly Data</p> <p>Thread Size</p> <p>Torque</p> <p>Lockwire Size</p>	<p>MS33656G12 (3 typical – STD and BY-PASS)</p> <p>25 to 30 foot-pounds (33,9 to 40,7 N.m)</p> <p>0.032-inch (0,81 mm)</p>

**ASSEMBLY (INCLUDING STORAGE)**

The Nitrogen gas charge pressure for the actual temperature of the fire extinguisher is listed in Table 701.

**Pressure versus Temperature Fill Chart  
Table 701**

TEMP °F	750- to 775-PSIG at 70°F		TEMP °C	5171 TO 5344 KPAG at 21,1°C	
	MIN	MAX		MIN	MAX
60	710	735	15,6	4896	5068
62	718	743	16,6	4951	5123
64	726	751	17,8	5006	5178
66	734	759	18,9	5161	5233
68	742	767	20,0	5116	5289
70	750	775	21,1	5171	5344
72	758	783	22,2	5226	5399
74	766	791	23,3	5282	5454
76	775	800	24,4	5344	5516
78	784	809	25,6	5406	5578
80	793	818	26,7	5468	5640
82	802	827	27,7	5530	5702
84	811	836	28,8	5592	5764
86	820	845	30,0	5826	5826
88	830	855	31,1	5723	5895
90	840	865	32,2	5792	5964
92	850	875	33,3	5861	6033
94	860	885	34,4	5930	6102
96	870	895	35,5	5999	6171
98	880	905	36,6	6168	6240
100	891	916	37,7	6144	6316
102	902	927	38,8	6219	6392
104	913	938	40,0	6295	6768
106	925	950	41,1	6378	6550
108	937	962	42,2	6461	6633
110	949	974	43,3	6543	6716

**SPECIAL TOOLS, FIXTURES, AND EQUIPMENT**

Special tools, fixtures, and test equipment required for maintenance of the fire extinguishers are listed in Table 901. Equivalent items may be substituted.

**Special Tools, Fixtures, and Equipment  
Table 901**

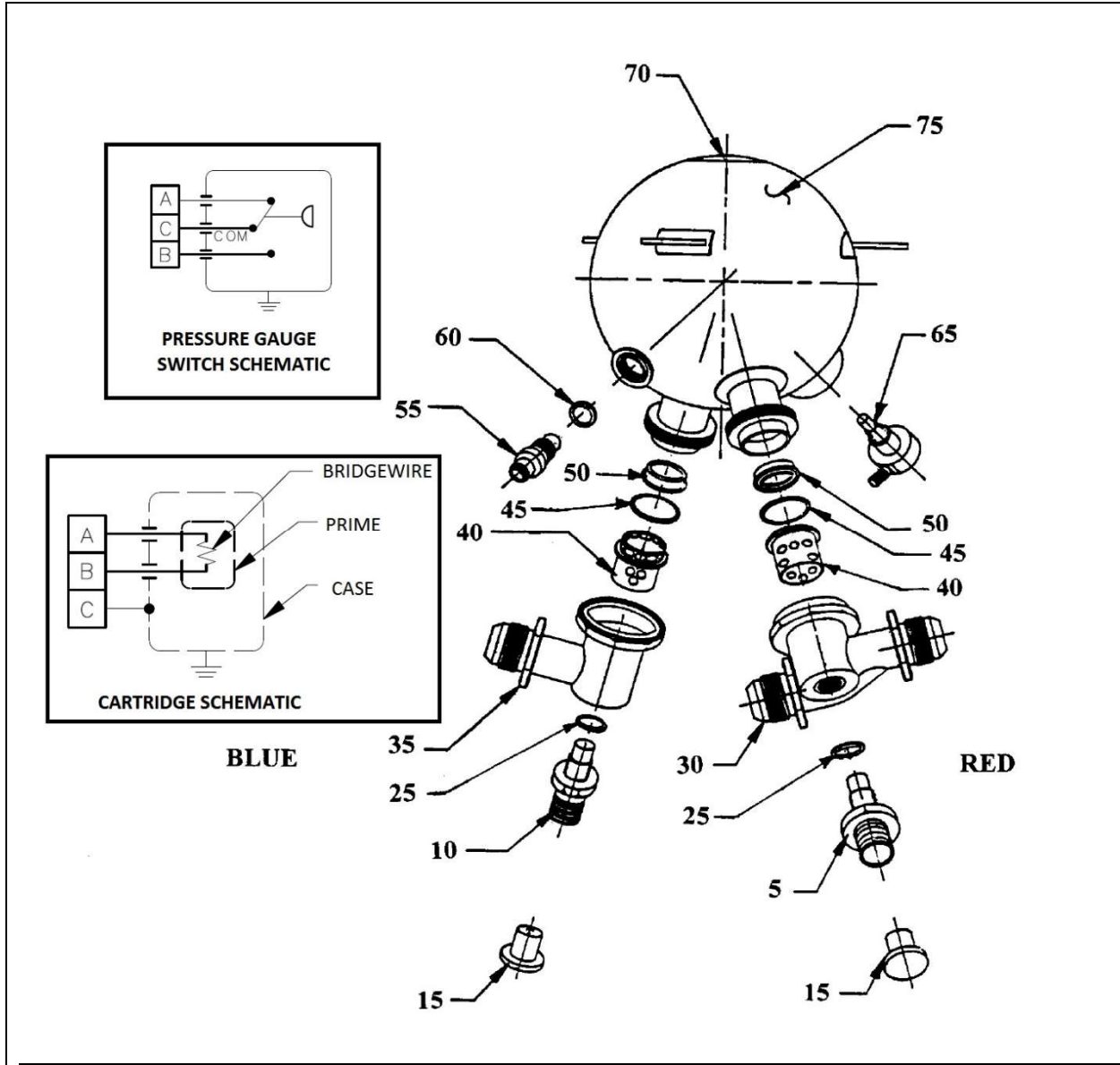
NOMENCLATURE	PART OR SPECIFICATION NUMBER	SOURCE (CAGE)
Cap, Hydrostatic Test, Discharge Boss	91021-1	AMETEK Ameron, LLC d/b/a MASS Systems (0FRR4)
Charging Fixture	23540-1	
Cradle	91033-60	
Discharge Tool	91097-1	
Outlet Safety Cap	27319-1	
Resurfacing Tool, Discharge Boss	91044-1	
Resurfacing Tool, Fill Boss	91045-1	
Safety Chamber, Cartridge	91035-1	
Welding Fixture	91100-1	AMETEK Ameron, LLC d/b/a MASS Systems (0FRR4)



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### ILLUSTRATED PARTS LIST



IPL FIGURE 1. FIRE EXTINGUISHER EXPLODED VIEW

**ILLUSTRATED PARTS LIST**

FIG. ITEM NO.	PART NUMBER	AIRLINE PART NO.	NOMENCLATURE							EFF	UNITS PER ASSY
			1	2	3	4	5	6	7		
1-1	23500-1		FIRE EXTINGUISHER SYSTEM-60 CUBIC-INCH								RF
5	30600-12		CARTRIDGE PRIMARY * (RED STRIPE CODE)								RF
10	30600-13		CARTRIDGE SECONDARY * (BLUE STRIPE CODE)								RF
15	CEC 08		PLUG, BLACK (CAPLUG) (NHA ITEM 5 AND 10) *								RF
-20	24626-1		TAG, CAUTION (NHA ITEM 15) *								RF
25	NAS1612-5		O-RING (NHA ITEM 5 AND 10) *								RF
30	23520-1		. OUTLET VALVE, BY-PASS (RED)								1
35	22730-2		. OUTLET VALVE, STD (BLUE)								1
40	22740-1		. SCREEN WELDMENT								2
45	MS29513-023		. O-RING								2
50	22720-1		. DISC, OUTLET								2
55	23530-1		. FILLER VALVE WITH BURST DISC								1
60	MS28775-013		. . O-RING								1
65	11400-1		. GAUGE, PRESSURE SWITCH 0- TO 1500-PSI (0 TO 10342 KPAG) (SUPSD BY ITEM -65A)								1
-65A	13000-2		. GAUGE, PRESSURE SWITCH 0- TO 1500-PSI (0 TO 10342 KPAG) (SUPSDS ITEM 65)								1
70	23522-1		. PLATE, IDENTIFICATION								1
75	23510-1		. WELDMENT, CONTAINER								1

- Item not illustrated

\* CARTRIDGES (ITEMS 5 AND 10) WITH BLACK PLUGS (ITEM 15), AND O-RINGS (ITEM 25), ARE PURCHASED SEPARATELY.